

## PCT



US





## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7:
C12N 15/53, 9/06, 5/10, C12Q 1/68

A1
(11) International Publication Number: WO 00/04163
(43) International Publication Date: 27 January 2000 (27.01.00)

(21) International Application Number: PCT/US99/15916
 (22) International Filing Date: 14 July 1999 (14.07.99)

(71) Applicant (for all designated States except US): E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; 1007 Market

15 July 1998 (15.07.98)

Street, Wilmington, DE 19898 (US).

(72) Inventors; and
(75) Inventors/Applicants (for US only): FALCO, Saverio, Carl [US/US]; 1902 Millers Road, Arden, DE 19810 (US). FOMODU, Layo, O. [US/US]; 216 Barrett Run Plaza, Newark, DE 19702 (US).

49 Agent: MAJARIAN, William, R.; E.I. du Pont de Nemours and Company, Legal Patent Records Center, 1007 Market Street, Wilmington, DE 19898 (US).

(81) Designated States: AE, AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

## **Published**

With international search report.

(54) Title: TETRAHYDROFOLATE METABOLISM ENZYMES

## (57) Abstract

THE THE STATE OF

(30) Priority Data: 60/092,869

This invention relates to an isolated nucleic acid fragment encoding a tetrahydrofolate metabolism enzyme. The invention also relates to the construction of a chimeric gene encoding all or a portion of the tetrahydrofolate metabolism enzyme, in sense or antisense orientation, wherein expression of the chimeric gene results in production of altered levels of the tetrahydrofolate metabolism enzyme in a transformed first cell.